

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claim in the application.

1. (Currently Amended) A method for prophylaxis or treatment of a cancer in a mammal, comprising administering to the mammal an effective amount of a polypeptide providing ~~comprising~~ a cytoplasmic binding domain of a β integrin subunit for ERK2 MAP kinase, or ~~having a modified amino acid sequence compared to the binding domain; in which the amino acid sequence of the binding domain has been modified,~~ the binding domain of the β integrin subunit ~~incorporating~~ having an amino acid linker region comprising amino acids that link opposite end regions of the binding domain together, the linker region being non-essential for binding of the MAP kinase to the binding domain, and the polypeptide ~~having~~ has a length of ~~25 amino acids or less at least 10 amino acids,~~ wherein the modified amino acid sequence is other than a fragment of a β integrin subunit and has 80% sequence identity with the binding domain or greater, the ERK2 MAP kinase binds to the modified amino acid sequence and is expressed by cancer cells of the cancer, the β integrin subunit is not expressed on the outer cell membrane of the cancer cells of the cancer, and the β integrin subunit is selected from the group consisting of $\beta 2$, $\beta 3$, $\beta 5$ and $\beta 6$, and wherein the binding domain of the $\beta 2$ integrin subunit for the ERK2 MAP kinase is respectively provided by the amino acid sequence KEKLKSQWNNDNPLFK (SEQ ID No. 11), RARAKWDTANNPLYK (SEQ ID No. 5), RSRARYEMASNPLYR (SEQ ID NO. 6) or RSKAKWQTGNPLYR (SEQ ID No. 4).

2-85. (Canceled)

86. (Previously Presented) A method according to claim 1 wherein the polypeptide comprises the binding domain of the β integrin subunit for the MAP kinase.

87. (Previously Presented) A method according to claim 1 wherein the polypeptide comprises the modified amino acid sequence.

88. (Previously Presented) A method according to claim 87, wherein the modified amino acid sequence comprises the binding domain of the β integrin subunit in which one or more of the amino acids in the linker region of the binding domain non-essential for the binding of the MAP kinase have been deleted.

89. (Previously Presented) A method according to claim 88, wherein the linker region of the binding domain has been deleted in the modified amino acid sequence.

90. (Previously Presented) A method according to claim 88, wherein the end regions are unchanged in the modified amino acid sequence compared to the binding domain of the β integrin subunit.

91. (Canceled)

92. (Previously Presented) A method according to claim 1 wherein the polypeptide is selected from the group consisting of RSKAKWQTGTNPLYR (SEQ ID No: 4), RARAKWDTANNPLYK (SEQ ID No: 5), RSRARYEMASNPLYR (SEQ ID No: 6), RSKAKNPLYR (SEQ ID No: 7), RARAKNPLYK (SEQ ID No: 8), RSRARNPLYR (SEQ ID No: 9), KEKLKQWNNNDNPLFK (SEQ ID No: 11) and KEKLKNPLFK (SEQ ID No: 10).
93. (Previously Presented) A method according to claim 1 wherein the polypeptide is coupled to a facilitator moiety that facilitates passage of the polypeptide across the outer cell membrane of the cancer cells.
94. (Previously Presented) A method according to claim 93, wherein the facilitator moiety comprises a signal peptide or a partial sequence thereof.
95. (Previously Presented) A method according to claim 94, wherein the signal peptide is a signal peptide for a growth factor.
96. (Previously Presented) A method according to claim 94, wherein the signal peptide comprises the amino acid sequence AAVALLPAVLLALLA (SEQ ID No: 1).
97. (Previously Presented) A method according to claim 94, wherein the signal peptide comprises the amino acid sequence AAVALLPAVLLALLAP (SEQ ID No: 3).
98. (Currently Amended) A method according to claim 1 wherein the polypeptide has a length of ~~greater than 5, and~~ up to ~~[[15]]~~ 35, amino acids.
99. (Previously Presented) A method according to claim 98, wherein the polypeptide has a length of from 10 to 15 amino acids.
100. (Canceled)
101. (Previously Presented) A method according to claim 99 wherein the β integrin subunit is $\beta 6$.
- 102-103. (Canceled)
104. (Previously Presented) A method according to claim 1 wherein the polypeptide is administered subcutaneously to the mammal for contact with the cancer cells at a site remote from the site of administration of the polypeptide.
105. (Previously Presented) A method according to claim 1 wherein the cancer is selected from the group consisting of epithelial cell cancers, prostate cancer, lymphomas, blood cell cancers, leukemias, and cancer of the liver, tongue, salivary glands, gums, floor and other areas of the mouth, oropharynx, nasopharynx, hypopharynx and other oral cavities, oesophagus, gastrointestinal tract, stomach, small intestine, duodenum, colon, rectum, gallbladder, pancreas, larynx, trachea, bronchus,

lung, breast, uterus, cervix, ovary, vagina, vulva, prostate, testes, penis, bladder, kidney, thyroid, and skin.

106. (Previously Presented) A method according to claim 1, wherein the cancer is an epithelial cell cancer.

107. (Canceled)

108. (Previously Presented) A method according to claim 98 or 99 wherein the polypeptide is coupled to a facilitator moiety that facilitates passage of the polypeptide across the outer cell membrane of the cancer cells.